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(54) Cutting tool for cutting well casing.

(57) A cutting tool (22) having elongate cutter arms (36) mounted about a pivot pin (40) for outward swinging movement. Cutting blades (58, 60) are mounted on the lower ends of the cutter arms (36) and have a plurality of closely fitting hard carbide cutting elements (90) secured thereto and forming an inclined leading planar cutting surface (82) inclined from the upper end of the associated blade (58, 60) at an angle A between one (1) degree and twenty (20) degrees relative to the direction of rotation. The cutting elements (90) have parallel rear and front faces (90A, 90B) connected by a peripheral side surface (90C) extending perpendicularly to the parallel faces (90A, 90B). Several embodiments of pivotally mounted cutter arms (36, 36A, 36B, and 36C) are illustrated including various blades (58, 60, 58F, 60F, 116, and 144) having a plurality of closely fitting cutting elements arranged thereon in a plurality of longitudinally and transversely extending rows for forming the leading inclined planar cutting surface.

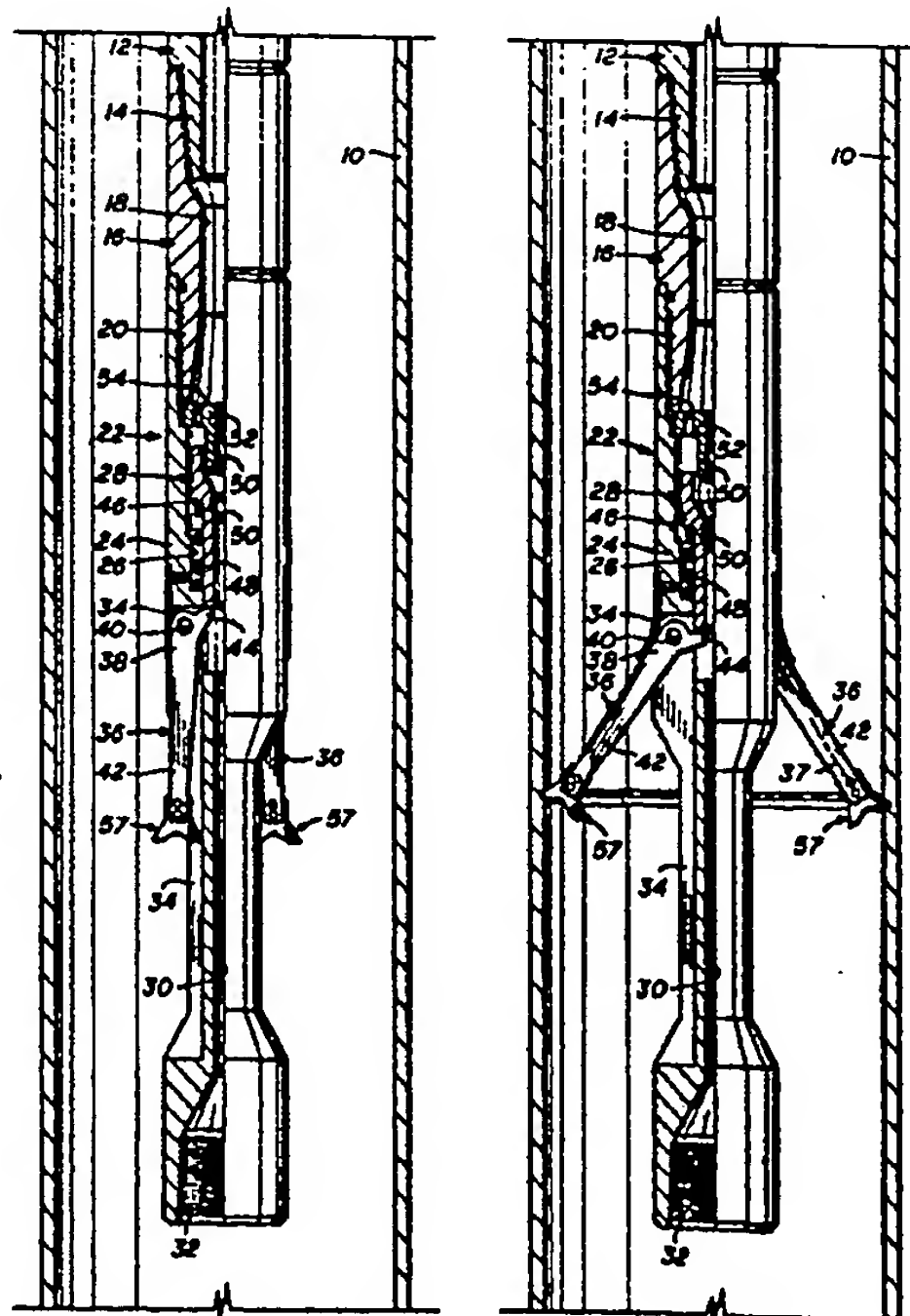


FIG. 1

FIG. 2

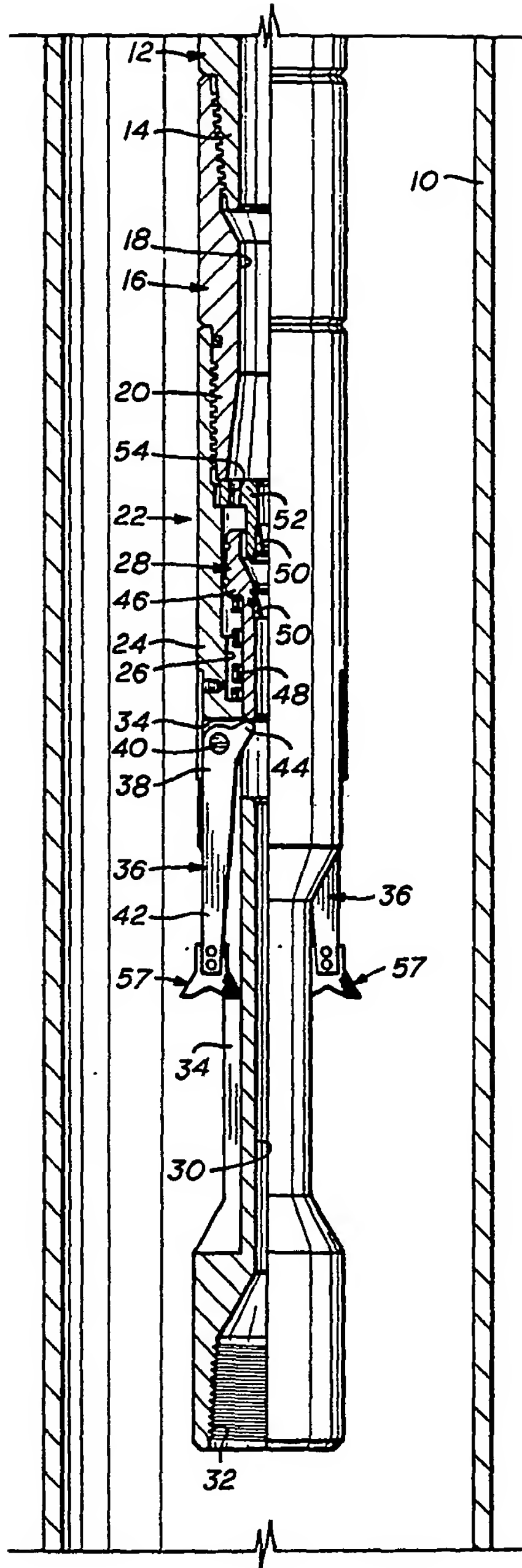


FIG. 1

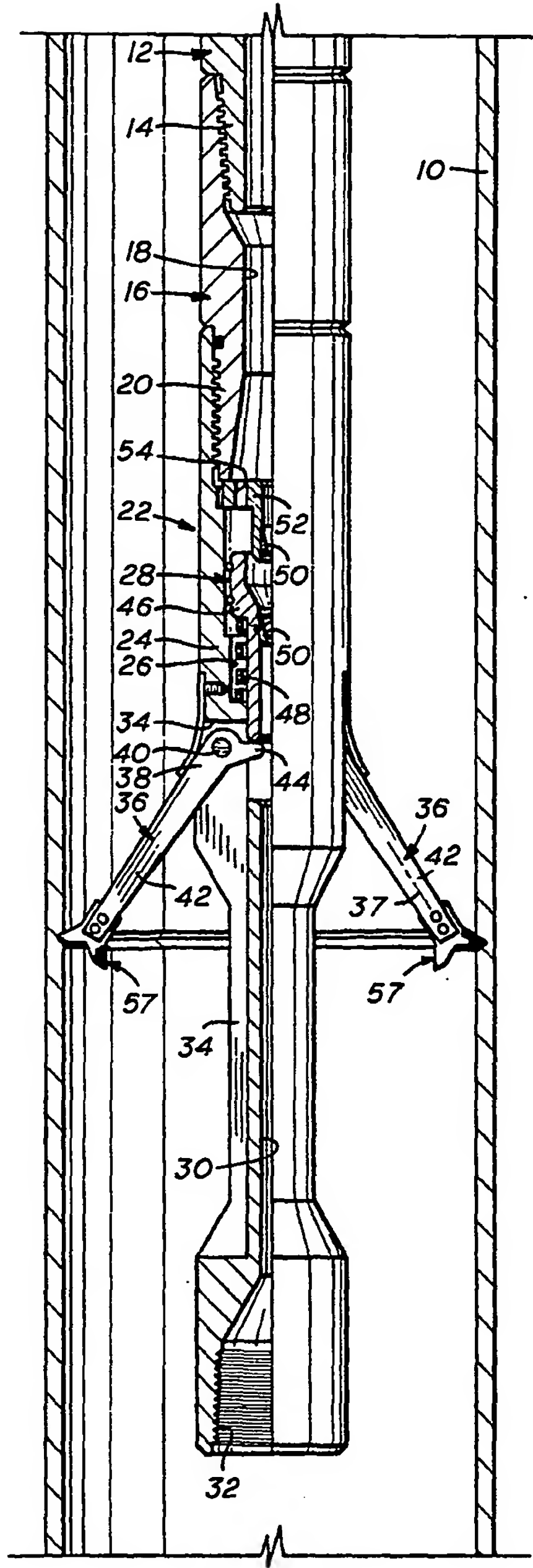


FIG. 2



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
D,A	US-A-3 331 439 (L. SANFORD) * Whole document *	1,7,8, 10,15, 19,23, 26,34, 36	E 21 B 29/00
A	--- US-A-3 059 708 (CANNON et al.) * Column 2, lines 43-50 *	1,7,8, 10,15, 19,23, 26,34, 36	
A	--- US-A-3 195 636 (B.J. CORDARY et al.) * Claim 1 *	1	
A	--- US-A-4 550 781 (E. KAGLER) * Whole document *	1	
A	--- US-A-3 145 790 (BRIDWELL et al.) * Claims 1-4 *	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			E 21 B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 08-03-1989	Examiner HEDEMANN, G. A.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

